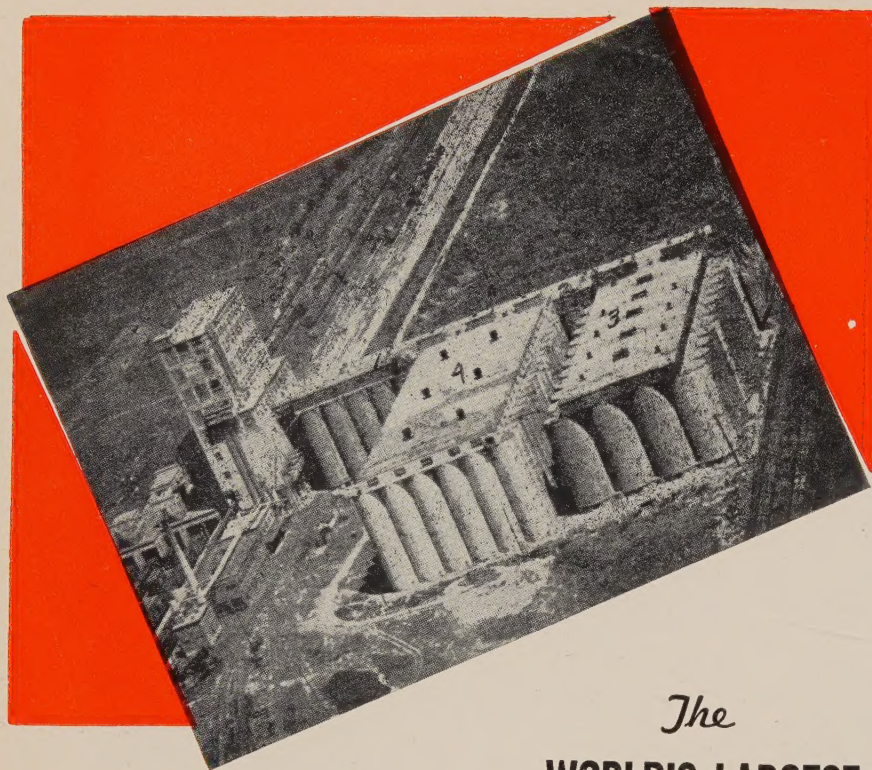


Loading Grain At
Duluth For Shipment
Eastward And Thence
To The Markets Of
The World

Grain

SEPTEMBER, 1946

The Magazine Of Plant Management And Operation



The WORLD'S LARGEST ELEVATOR

ATTESTS TO THE SUPERIORITY OF

In-Fil-Tro WEATHER-PROOFING

Everyone's heard of and seen pictures of the World's largest conventional-type concrete elevator—the 10,200,000 bushel Santa Fe at Kansas City, operated by the Davis-Noland-Merrill Grain Company, members of all the larger grain exchanges.

But did you know that 10 long years ago one section of this mammoth plant was water-proofed with In-Fil-Tro? . . . And that the work was so satisfactory that a second section was similarly treated the following year? . . . And that a year later the balance of this huge structure was Weather-proofed with this same, long lasting, satisfactory material?

Need anything more be said? . . . When you're ready to take care of your plant, investigate, then call in—

B. J. MANY CO., INC.
30 N. LA SALLE ST. CHICAGO 2, ILL.

Grand Central Terminal, New York, N. Y. Baltimore Life Bldg., Baltimore, Maryland
213 State Street, Detroit, Michigan
AUTHORIZED AGENTS: Pioneer Sand & Gravel Co., Inc., 901 Fairview Ave. North, Seattle 9, Washington
Northland Machinery Supply Co., Ltd., Winnipeg, Manitoba
R. H. Crawford, Oakville (Ontario), Canada
Northland Machinery Supply Co., Ltd., 203 Hardisty Street, Ft. William, Ont.

LIABILITY FOR DUST

The Workmen's Compensation Board in Buffalo has ruled that disabilities induced by inhalation of grain dust have been established as a cause for compensation payments. The board affirmed a decision of Referee Louis Pelowski in favor of Kenneth Lee, a former employe of GLF Mills, in setting the precedent.

Lee is entitled to \$23 weekly compensation, retroactive to the time of his disability, Dec. 24, 1944, when he developed respiratory congestion, the referee ruled. Employed for 14 years as a house man, handling and weighing sacks of grain, GLF paid his salary for four months after his disability, yet the board ruled that he was entitled to the full amount of compensation from the time he was discharged.

WATCH WATCHMEN

Failure of watchmen to perform properly their duties was a major factor in about 10% of large fire losses involving losses of \$250,000 or over.

In a series of 178 typical cases of watchman failures, it was found that 41.1% were due to the watchman's failure to notify the fire department promptly at the outbreak of the fires; 34.3% to watchman delinquency; 21.8% to improper use of existing fire protection equipment (such as shutting off sprinklers prematurely or prior to fire, etc.); 2.8% to poor planning of watchman's route.—Occupational Hazards.

LINDQUIST FOR SELF

Arthur Lindquist, for many years associated with Macdonald Engineering Co., Chicago, and in recent years with Vern E. Alden Co., architects and engineers, has engaged in the business of designing plants on his own account.

"GRAIN"

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Electric Drives

By JOHN BELANGER, Manitoba Pool Terminals, Limited, Port Arthur

It is a far cry from the first grain plants to our modern concrete structures which dot shore line and prairie alike and from the wheelbarrow to the thousands of bushels per hour pouring from a myriad of spouts. Prior to 1912, larger plants were rope driven from a central steam engine, and individual machines such as conveyors, cleaners, elevating legs, etc., were driven from line shafts with rope drive reductions—and we still have a few of these in operation. Since then all Fort William-Port Arthur elevators have been exclusively electrically operated with individual drives for all important equipment.

Power is from Hydro Electric sources delivered at 22,000 volts in the case of Port Arthur and Fort William, and at other voltages such as 33,000 or 12,500 in other places, and a sub-station incorporated right in the structure to transform this high tension current to 550 or 440 volts for motor operation. This equipment will be described in more detail a little later on.

Individual Motor Spells Industrial Progress

INDUSTRY in general has approved of the unit drive for machine operation and it is in this field that the electric motor has come into its own. The use of the electric motor, varied in horsepower to suit any condition of mechanical load, has been the greatest factor in modern mass production. A study of the advances made in the transmission of power to belts in terminal elevators may be of interest and the schedule below shows the order in which these came into use:

Steam Plants with Line shafts:
1st reduction to counter shaft, belt, belt, rope drive.

2nd reduction to head pulley, gear, belt, rope drive.

Motor Drives to Line Shaft: 1st reduction, rope drive.

2nd reduction, rope drive.

Motor-driven Unit Drives: 1st reduction, (a) rope drive, (b) chain drive, (c) chain drive, (d) reduction set direct to head pulley with flexible coupling.

2nd reduction, rope drive, rope drive, chain drive.

Let us now look at a modern terminal and list the various motor drives as we follow the grain from unloading to shipping.

Receiving: Some plants are equipped with automatic car unloaders on which the car is spotted, locked, tilted both ways using baffles, and on one of these dumpers seventy-three cars have been unloaded in ten hours with a maximum of 75 hp.; the average is six cars per hour, or in the plant I have in mind, 300 cars per day (10 hours) with five dumpers.

Shunting Locomotives Well Liked

THE majority of houses use shovel machines, however, and the power required is 15 h.p. for four shovels unloading two cars at a time. While some houses fortunately have their own shunting locomotive to spot the cars for unloading, yet the most common way is the car puller using 50-75 h.p.



The conveyor belts taking the grain to the legs run at 600 to 900 feet per minute or an average of 850 feet per minute and take from 5 to 7½ h.p.

Receiving legs elevating to a height of from 150 to 200 feet at a rate of from 18,000 to 24,000 bushels per

hour use from 125 to 175 h.p. motors. These motors, of the high torque type, are connected to the head pulley shaft through reduction gears having a back stop incorporated in the gear set. The motors are designed to start a fully loaded leg from rest, and the control is interlocked with the belt conveyor control feeding the leg so that if for any reason the leg motor should stop the conveyor will also stop.

It might be interesting at this point to go into a little more detail regarding interlocking control to avoid leg blockings, which occurrences are to be avoided and fought against.

Chokes Cause Explosions; Ruin Belts

THE dangers of a blocked leg are many; explosions have been caused by them to say nothing of the life of a leg-belt being shortened thereby.

In modern elevators where there are long annexes in different directions, running at times to a single leg at the rate of upwards of 25,000 bushel per hour, telephone communication has proved too slow in checking the overloading of legs, consequently the quickest way to avoid this condition was to throw out the belts feeding it, and so stop buttons are located at convenient points to shut off power to conveyor motors concerned. But stop buttons are in themselves ineffective unless all belts are electrically interlocked, that is, all belts behind the belt feeding the leg are made to stop when the nearest one is thrown out.

In one plant I have in mind grain runs on three separate belts before it is discharged into a leg boot, and heavy spills would occur if each of these belts could not be brought to a stop simultaneously.

Where to Spot Stop-Buttons

THE first question to be settled is the location of the stop buttons. It is considered that the main floor adjacent to the leg casings is the ideal location. It is at that point where men of experience are constantly at work—and an alert man can tell instantly when a leg is being fed more grain than it can safely elevate. When this happens, if only very rarely, it is a wonderful safeguard, and at the same

time a simple matter to press a button and throw out all belts feeding the leg.

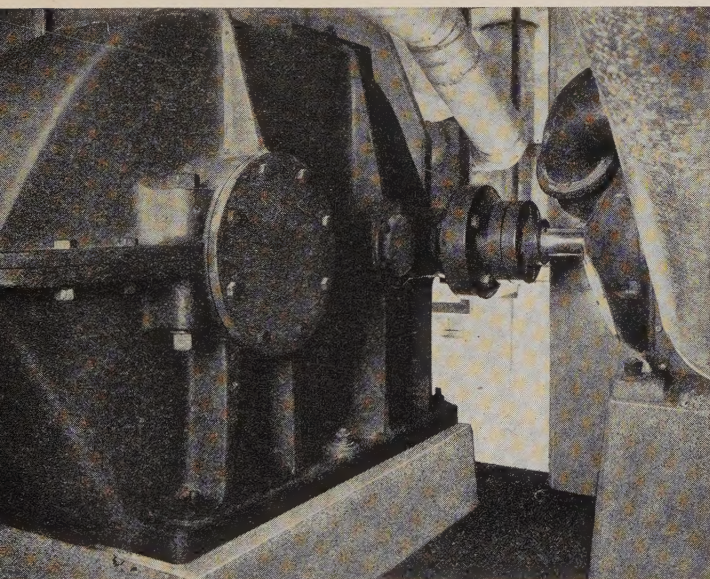
With the stream of grain stopped it only takes a moment or so for a leg to clear itself. There is no damage, no spills to be cleaned up, no boot to dig out, no buckets to be straightened—and with the modern high torque motors a loaded belt can be started as easily as a light one.

Therefore experience recommends the electrical interlocking device on all conveyor belts to the legs they serve and stop buttons on the main floor connected to the starters of the nearest belts to the legs, as being most economical.

Stop-Button Installation Inexpensive; Simple

THE installation of stop buttons is both inexpensive and simple. The wiring is from that wire in starters which serves the low voltage release coil to one side of the stop button and from the other side of the stop button back to the opposite side of the N.V.R. coil.

Cleaners are either run separately with a 15 h.p. motor or in groups of 3 using 10 h.p. per cleaner in power.



From the cleaners, grain, refuse, etc., is taken away by means of screw conveyors or spouts to cleaner legs handling approximately 5 cleaners with approximately 50 h.p. per leg—another leg or legs being provided for tailings and screenings.

When a drier is installed from 50 to 75 h.p. is required for the fan; also 50-75 h.p. is required for a dust collecting fan.

Cupola belt conveyors requiring from 25 to 60 h.p., depending on the length and capacity, are generally 36 inch belts, carrying 18,000 bushel

per hour, and each belt is provided with a movable tripper taking power from the belt by friction drive and spotting grain to any desired bin. These belts are either driven by chain or reduction gear set.

Basement belts require from 25 to 60 h.p., depending also on capacity, and take grain to shipping legs, one being installed for each basement belt.

Shipping Legs Need Interlocking Arrangement

EACH shipping leg requires from 125 to 175 h.p. motors, also of the high torque type interlocked with basement belts. If the plant is located on a dock for water shipments, grain, after passing through scales, goes to shipping bins and by spout to boat, or if to cars then also by spouts. But if the dock is some distance away shipping galleries are provided using motors up to 75 h.p. depending on length.

In transfer elevators, where grain is unloaded from boats, a marine tower is installed, requiring up to 150 h.p. motor.

In addition to the above mentioned motor requirements, various other

Car Haul	1	50	900	S.C.
Car Shovels	3	15	1200	S.C.
Emerson Cleaner ..	6	5	1200	S.C.
Monitor Cleaner ..	3	10	1200	S.C.
Carter Disc Cleaner ..	8	10	1200	S.C.
Scouring Machine ..	1	30	1200	S.C.
Passenger Elevator ..	supplied by Mfrs.			
Manlift	1	3	1200	S.C.
Dust Collector	1	50	1200	S.C.
Air Compressor ..	1	10	1200	S.C.
Wheat Washer ...	1	10	1200	S.C.
Carter Disc Cleaner ..	1	15	1200	S.C.
Oat Clipper	1	10	1200	S.C.
Drier Fan	1	25	1200	S.C.
Drier Fan	1	20	1200	S.C.

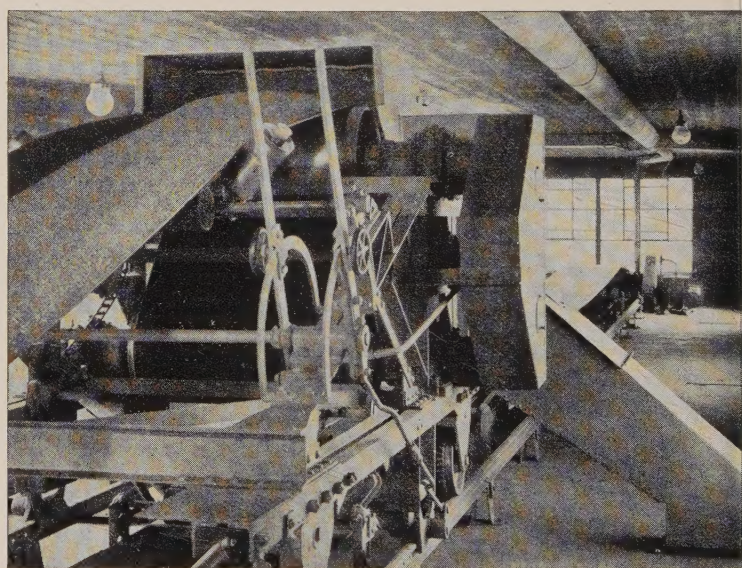
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Note—H.T. denotes high-torque line start motors, i.e., low starting current high starting torque. S.C. denotes standard squirrel cage motors, normal starting current, normal starting torque.

[Incidentally Pool No. 7 Terminal, with 7,000,000 bushels capacity, has over 150 motors with a connected load of 6,000 h.p.]

It might be well at this point to consider the types of motors used for supplying power in an elevator.

The first motors were of the standard squirrel cage type. These however were not built to develop high torque, consequently motors much larger than required for normal operation were provided with the result that, owing to their inherent design, they operated at low power factor. [For example, on a leg drive requiring 90 h.p., a 125 h.p. motor would be supplied to provide the necessary starting torque.]



motors are needed for such equipment as a passenger elevator (7½ to 10 h.p.), manlifts (5 to 7½ h.p.), and an air compressor (5 h.p.).

The following motors, 3 phase, 60 cycle, 550 volt. are required for terminals of three million bushel capacity which receive grain from track by car and ship by water or car:

Location	No.	H.P.	RPM	type
Shipping Leg	2	175	900	H.T.
Receiving Leg	2	100	900	H.T.
Compartment Leg ..	4	50	900	H.T.
Belt Conveyor ..	2	40	900	H.T.
Belt Conveyor ..	2	35	900	H.T.
Belt Conveyor ..	2	35	900	H.T.
Belt Conveyor ..	4	40	900	H.T.
Belt Conveyor ..	2	10	900	H.T.
Screw Conveyor ..	1	10	900	S.C.

However, with the advent of the high torque motor of either the double deck or deep-bar construction, motors were applied of the proper horse power for normal running conditions which would also start the leg or conveyor from rest even in sub-zero weather.

Open Motors Predominate

MOTORS are either of the open or enclosed type depending on the electrical code governing the locality, the general practice in Canada being open construction with compressed air outlets provided so that they can be

blown out at regular intervals. Control equipment provided is of the dust tight type, and in many cases is put in dust tight control rooms. The "start" and "stop" buttons, however, are invariably in sight of the motor. Totally enclosed motors of either pipe ventilated or fan cooled construction, however, are available and are used in many instances. Several means are used to compensate for low power factor resulting from underloaded motors, for which condition power companies demand a penalty. First, on some drives which have a fairly steady load, synchronous motors can be used as this type of motor is capable of maintaining a high power factor.

The most common method up to about ten years ago was the installation of a synchronous condenser in the substation, which is the same as a synchronous motor except that it drives no mechanical load. The operator, by regulating the field excitation, could then adjust the power factor at will. To-day, however, static condensers or capacitors are provided in banks, made up of units of 5 or 10 KVA each and these banks can be thrown on or off from the control switchboard.

Cheaper To Buy High Tension Power

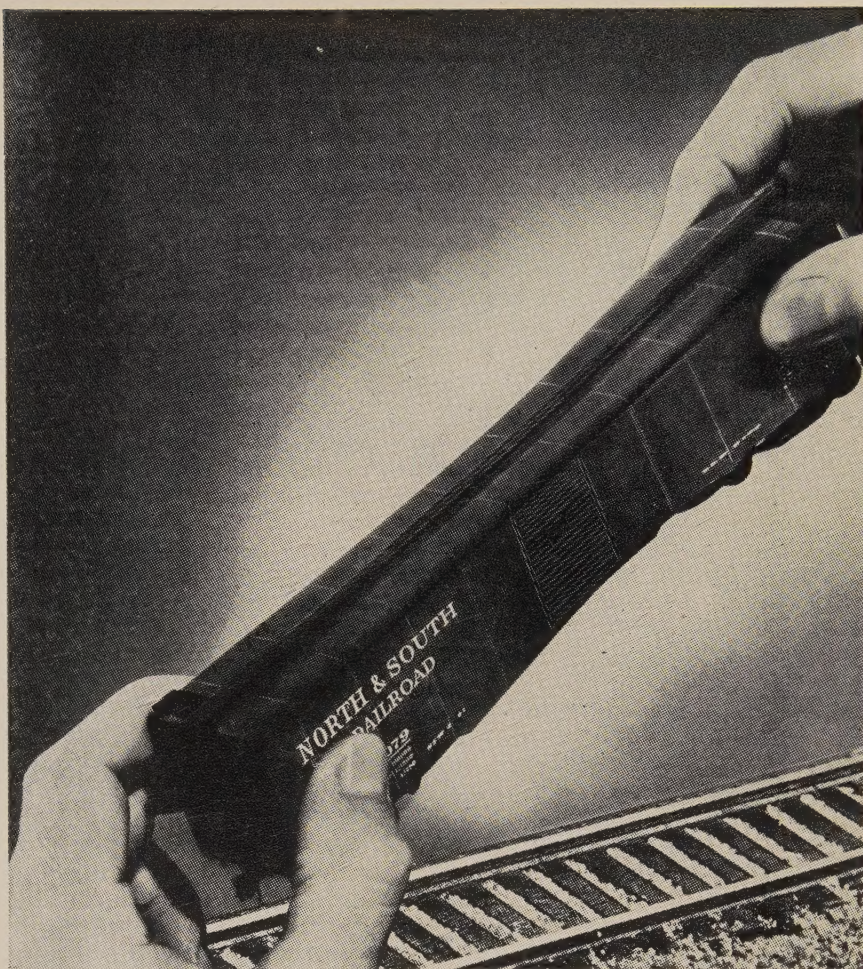
OWING to the fact that power companies allow a discount to consumers taking high tension power, most plants provide their own substation, including transformers, to reduce the voltage to 440 or 550 volts for motor operation. Included in this building would be lightning arresters, high tension circuit breakers, power and lighting transformers, and control switchboard and power factor condensers. The power and lighting circuits are taken to all parts of the plant in conduit with proper junction boxes located to conform with electrical codes.

It would be interesting, I am sure, to take an actual example from one of our large houses during a Fall month when approximately 3,500,000 bushels were received and the same amount shipped. The maximum demand was approximately 1800 h.p.; the kilowatt hours consumption was 264,000, and the power cost per bushel was .0084c. In another month where 5,400,000 bushels were received and shipped the maximum demand was 2500 h.p., kilowatt hour consumption was 385,000, and cost per bushel was .0073c.

The above are based on rates for power, as follows:

Service charge—\$1.00 per h.p. per month of maximum demand:

Consumption—1.75c per K.W.H. for



WANTED: FREIGHT CAR STRETCHERS

We've never seen one—but they'd be mighty handy right now. There's a record-breaking harvest now being moved by the railroads. Industrial production is rising. There just aren't enough freight cars to move all the traffic as quickly and efficiently as we'd like.

During the war, the railroads couldn't obtain all the new cars they needed. Even now, material shortages and other difficulties are holding up freight car construction. And an ever-increasing number of freight cars are wearing out due to heavy wartime service.

The average freight car load has decreased in the last year. More cars carry less-than-carload lots. And the adoption of the five-

day week by many industries has increased the time that cars stand idle waiting to be loaded or unloaded.

If the average time it takes each car to handle a load could be reduced by *one day*, it would add the equivalent of 100,000 cars to the nation's supply. Railroads are striving to reduce this "turn-around" time by speeding up the hauling, switching and repair of cars. Shippers and receivers of freight can help stretch freight cars by loading and unloading them *at least six full days a week*.

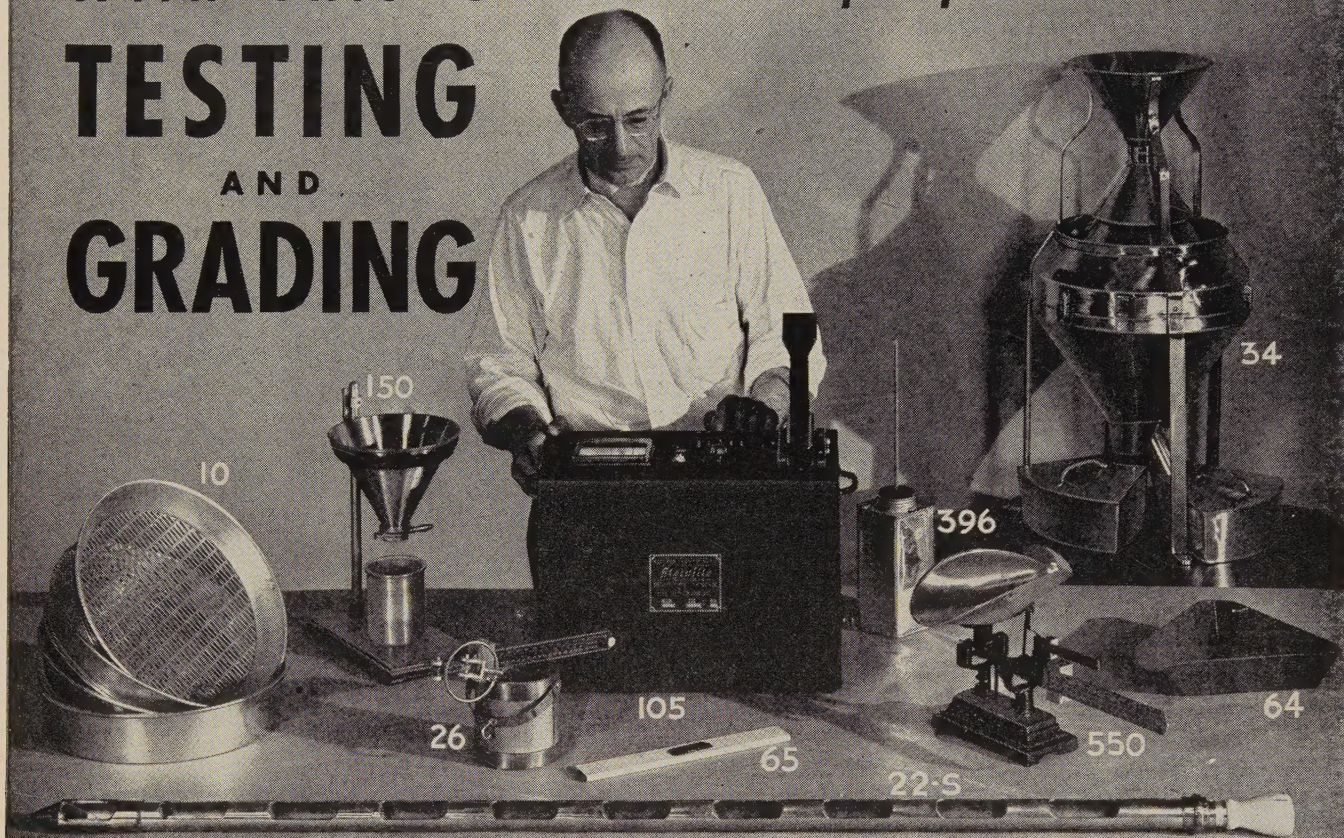
Working together, as they did so successfully during the war, railroads and shippers can overcome these shortages and avoid business losses.



MAKE MONEY! SAVE MONEY!

With This Official Equipment For

TESTING AND GRADING



You should have all the equipment illustrated above. Why? ... because these units are used by Board of Trade Sampling Departments, State Grain Inspection Departments and Federal Grain Supervision Offices. The grades on the grain you ship are established with these precision devices. By having the same equipment you can buy from the farmer with more certainty of your grades. You eliminate guesswork ... you make money ... save money.

Since 1912 Seedbuero has been considered headquarters for seed and grain testing and grading equipment. Let us help you solve your testing and grading problems.

#105 Steinlite Moisture Tester. America's most popular modern moisture tester for whole and processed grain. More in use than all other electric testers combined. Is fast, accurate and easy to use. Calibrated against official oven methods and guaranteed to give comparable results. Sold on Free Trial basis.

#34 Boerner Sampler and Mixer. Standard equipment in Federal, Local and State Inspection Offices for reducing sizes of representative samples of grain taken from cars, trucks or bins. Insures accuracy in mixing samples ... accurate in grading.

#26 Weight Per Bushel Tester. Relief etched beam makes readings sharp and clear. Quickly gives weight per bushel, percentage of loss in cleaning, and direct weight of sample. Accurate, rugged, durable. Complete with #65 Government Standard hard wood strike-off stick.

#150 Filling Hopper and Stand. For use with 1 pint and 1 quart weight per bushel tester. Constructed of heavy spun lacquered brass. Sliding plate valve is instantly released.

#22-S Grain Probes. The official Government standard probe. Made of extra heavy gauge brass.

#10 Grain Dockage Sieves. Made of 20 gauge aluminum, 13 inch diameter, 1 7/8 inch inside depth. Precision and commercial grades. Write for perforations available.

#64 Sample Pan. For handling samples of grain for testing and grading. Standard in all respects.

#396 Sample Cans. Made of carefully soldered heavy tin—moisture proof.

#550 Scale. Ideal for weighing grain for moisture tests, dockage percentage, and weight per bushel; also for mail matter up to 18 oz.

SEEDBUERO EQUIPMENT COMPANY
 627 Brooks Building • Chicago 6, Illinois

Please send details about products checked (see numbers above).

#105	#26	#150	#10	#396
#34	#65	#22-S	#64	#550

Also send free copy of "Grain Grading Primer".

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EQUIPMENT COMPANY

627 BROOKS BUILDING • CHICAGO 6, ILLINOIS

1st 50 hours use per month of maximum demand; 1.0c per K.W.H. for 2nd 50 hours use per month of maximum demand; 0.1c per K.W.H. for all additional kilowatt hours.

High tension discount—15%.

Prompt payment discount—10%.

Incidentally what is believed to be a shipping record was established when one million bushels were loaded into three boats in ten hours with six shipping legs. It is interesting to note that one cargo alone contained 550,000 bushel of wheat which at 12 bushels per acre is equivalent to 45,849 acres of land, or at 1350 bushel to the car would fill 423 box cars on a train three miles long, or it is equal to the total capacity of 22 country elevators.

While mentioning country elevators, these too are being equipped with electric drives. Formerly the leg was driven by a steam driven or gasoline engine, and as the leg was only required at intervals it meant the starting up of the prime mover whenever required. But now in localities served by power, motor gear reduction sets of compact design are available for mounting at the head pulley.

In one district of Western Canada the power company with a rural network of line has put on a campaign offering special extended terms of payment to enable owners to change over to electric drives.

At the Canadian Lakehead only two houses are still driven by the steam engine. There were others, but these have either been converted to electric drive or demolished.

In closing may I extend an invitation to visit Fort William and Port Arthur. I know you will be made welcome and be given every opportunity to inspect the modern plants which dot our harbours.

EXPANDED CATALOG NOW AVAILABLE

The new and improved Seedburo Catalog and Reference Book recently mailed to customers now includes over 500 well described and illustrated items. Many new specialties have been added, including the O.K. bagging scale, Winslow truck scale, time switches, fire extinguishers, Gibbons bag holders, aluminum scoops, DDT products, new models of inter-communication equipment, and many other equally important and wanted items.

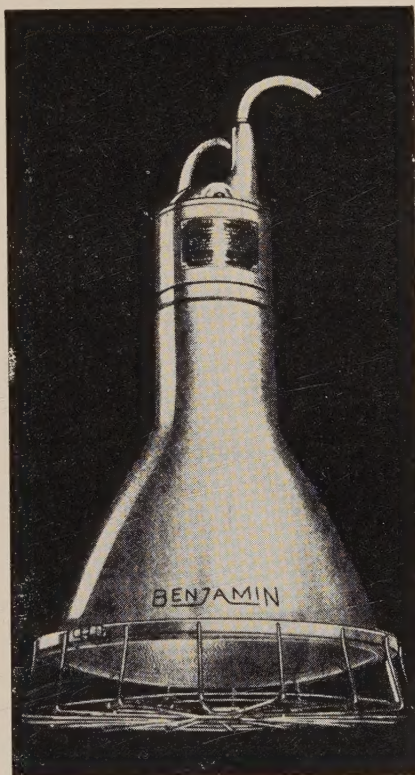
In addition to the many products in the catalog, one section is devoted exclusively to grain sampling and grading of grain, preparing samples for testing and analysis and mechanical grading tests, plus grading charts

BIN INSPECTION LAMPS TO BECOME AVAILABLE SOON

Some time in the not too distant future the very much coveted Benjamin Bin Inspection Lamp—the only approved Class 2 Group G lamp ever manufactured—will go into manufacturing production again.

This device has an interesting background closely aligned with a progressive leader of the Superintendents' Society. It was the late Henry Cox who helped stimulate experimental work in this field, and he nursed it through many years of trial and error. Finally the approval of the Underwriters' Laboratories was obtained and a limited quantity were distributed before the war forced all-out efforts in other directions.

Those relatively few who were fortunate enough to obtain one or more of these lamps years ago will doubtless be the first ones to order addi-



tional units, as every one we know of who has used them wouldn't part with them at many times their cost. And now that there is promise of "safe" equipment it is questionable that operators would think of running the risks involved in using unsafe and unapproved equipment—particularly

for wheat, sorghums and soybeans—all essential and important information for you.

If readers have not received their copies of the new Catalog and Reference Book, write today to Seedburo Equipment Co., 223 W. Jackson Blvd., Chicago 6, Ill.

in face of the deplorable and costly explosion and fire loss record piled up to astounding heights by the grain handling and processing plants of the North American continent during the war years.

Designed for safely and effectively lighting the interiors of empty or filled grain storage bins, this dust-tight portable floodlight provides a high candle-power concentrated beam of sufficient intensity to illuminate even the bottom of empty tanks. Thus inspection, cleaning and other servicing operations can be safely and efficiently performed.

Lighting equipment for use under highly combustible dust conditions must naturally be designed to reduce accumulations on the fixture far below the point where overheating, from lack of normal radiation, might ignite such dust as inevitably collects on the outside of such a lamp. In addition to its smooth, streamlined surface minimizing dust accumulations, any combustible dust which might gather on the outer surfaces cannot ignite here because the temperature of the lamp is kept at a safe low level through a special method of heat insulation.

Furthermore, the lamp is designed to eliminate any possibility of dust seepage from the surrounding atmosphere. With no openings in the body, the bottom of the unit is sealed by an easily cleanable, gasketed glass cover, while a "stuffing" gland in the cord entrance at the top of the hood seals the fixture at this point. A non-ferrous, non-sparking metal guard provides a stand for setting the portable on the floor without the further danger of breaking the glass cover. Light weight for easy handling—10½ pounds—delivery on this 22x14 inch lamp will probably start late this fall or early this winter, and orders will be filled by the Seedburo Equipment Company of Chicago in the rotation in which they are received. As *op* said: "A word to the wise . . ."

THEN ALL WILL GAIN

Nobody wins a war.

Just as the world must find a way to avoid war, so management and labor must find a way to settle industrial disputes.

No man can long take more than he gives.

The only safe way to increase wages is to apply our hands, our minds, and our machines more skillfully to the job to be done.

MANLIFTS

By Paul L. Bachman, General Mills, Inc., Minneapolis

IT CAN be safely said, without fear of contradiction, that the belt or continuously running manlift is the most dangerous piece of equipment in any grain elevator or flour mill. It alone has been responsible for more serious accidents than any other piece of equipment.

It has been predicted that unless the frequency and severity of manlift accidents are reduced, the Federal and State accident control authorities will eventually prohibit their use. Most of you, no doubt, have seen one or more manlift accidents, and although they are not frequent in number, they are generally quite severe.

Employee Instruction

A TRAINING program should be inaugurated for the purpose of teaching every employee, both new and old, the proper method of operating and using a manlift. The training program should follow along the lines of the Job Instructor Training Method.

The person using the manlift should face the belt, both feet should be on the step, and both hands should grasp the handles. The body should be carried close to the belt and the weight centrally distributed.

In mounting the manlift, the hand should first grasp the handle, and the foot should then be put on the step, but in no event should this occur if the step is more than six inches above the floor. In getting off the manlift, the operation should be reversed—the foot should be removed first and then the hands.

Unless tools and equipment can be completely contained within the pockets, or unless they can be completely contained within a sling thrown over the shoulder, they should not be carried on the manlift.

The manlift is not intended for and should not normally be used for the elevation of merchandise and material. However, in some mills where no other means of elevation is available, the manlift may be used, but only after either posting guards or providing barricades at every floor level. The customary warning light is not sufficient.

Inspection

A PERIODICAL inspection, no less than weekly, should be made of the manlift. This is probably the most important part of the manlift safety program. Every manlift in the plant should be tested and inspected. This inspection should be made even

SAFETY INSTRUCTIONS FOR MANLIFTS

Prepared by Lawrence A. Meeker of Arcady Farms Milling Co., Chicago, and a special committee from the Grain Division of the National Safety Council's Food Section, these Safety Instructions for employees should be discussed, as well as prominently displayed wherever possible:

1. Only authorized persons should ride on manlifts.
2. Only one man should ride on a step.
3. Carry only tools or small objects which can be completely concealed in a trouser pocket or in the special sling or box provided.
4. Grasp the handhold before placing your foot on the step.
5. Always face the belt and grasp the handhold firmly.
6. Step on or off only at floor levels.
7. Keep the landing space open.
8. Report any defect or irregularity of operation in the manlift.
9. If the manlift stops, be sure everyone is in the clear before starting it.

National Safety Council
Safety Instruction Card No. 549.

though the manlift is used only occasionally. If any serious hazard is discovered, the manlift should IMMEDIATELY be put out of operation and should not be used until repaired.

The manlift should be completely dismantled not less than once in three years, and preferably once a year if the manlift is used constantly.

The dismantling should be complete and should include the head pulley with all gears. This is the only way in which wear on the taper pin and worm gear shaft can be detected on most types of lifts.

The weekly inspection should cover, but not necessarily be limited to the following items: rollers or slides, steps, step bolts, rails, belts, pulleys, motor, handholds, driving mechanism, landing floors, guard rails, brakes, brake ropes, switches, lights, relays, signaling equipment.

Maintenance

THE principal items of maintenance are as follows:

1. Steps:

The best material for the construction of the step is softwood, preferably pine. Double steps, that is, different up and down, should contain grooves parallel with the width of the belt. On single, dual purpose steps where grooving might weaken the steps, non-skid surfacing can be applied to the treads. These grooves should be one-fourth inch wide, one-fourth inch deep and approximately a half inch apart.

This type of construction provides a non-skid surface which does not readily fill up with dirt and grease and does not become slippery with wear.

If the step is constructed without corrugations it should be covered with the new non-skid floor covering, developed in the last two or three years for the United States Navy. This material wears well and gives a very good non-skid surface.

The steps should fit the track perfectly so that they will not jump out of the track. If it is necessary to remove a step for repair, or to remove it permanently, the handle bars on both sides of that step should likewise be removed. This will prevent an employee from grasping a handle bar under which there is no step.

The bolts fastening the step to the framework, as well as the bolts fastening the framework to the belt, should be tight and fastened with lock-washers.

2. Rails:

The guide tracks and braces should be in first-class shape and should be secure.

Tracks partially worn should be replaced. At no time should excess slack be permitted.

To prevent buckling or bending of the rails, the entire manlift, when possible, should be suspended from the top and should not be supported at each floor. There should, however, be guides on each floor to hold the guide rails in place. This type of construction will permit expansion and contraction without buckling.

3. Belts:

The belt itself should be very thoroughly checked, particularly where the two ends of the belt are fastened together. Any indication of excessive stretching, wear or weakening should be justification for replacement. Although lifts in excess of 100 feet are not recommended, nevertheless, where they are found necessary, the belt should be 1 inch in width. The belt should always be kept tight.

SUGGESTS MANLIFT CODE IDEA

Referring to a recent issue of GRAIN carrying the St. Louis Manlift Code Ordinance, this is a very good safety code and all Safety Engineers should enforce it. However, I would like to suggest an addition thereto, as follows:

"All manlifts should be provided with a narrow steel emergency safety ladder to be on either side of the manlift frame so that if a lone employee or night watchman gets stuck between floors, in case of a breakdown or power cut-off, he can climb down or up to the next landing."

I have been on manlifts where the second landing was over fifty feet high. It is this type of manlift that I have in mind in suggesting the above.—H. W. Puetz, Safety Engineer, Milwaukee.

The speed of the belt should never be in excess of 90 feet per minute and should be uniform throughout the plant. In flour mills where there is a great amount of traffic on the lift, it is advisable to reduce the speed to 60 feet per minute.

4. Motors:

The motor gear reducer and entire driving mechanism should be very carefully inspected because a failure here might permit free wheeling of the belt with an attendant serious injury.

A free-wheeling clutch with a ratchet can easily be installed which will prevent the elevator from running backward, however this offers no protection against the belt's running forward at an excessive speed. To my knowledge, no practical device has yet been developed to prevent a free-wheeling belt from rolling forward too fast.

5. Hand Holds:

The cup type hand hold is to be preferred because it prevents an employee's grasping the wrong handle. The hand holds should be 50 inches

above the steps and should be painted a light color—"Visibility Yellow." The following stencil should appear immediately above the hand holds:

FACE BELT (1½ inch letters)



ONLY (¾ inch letters)

ONE PERSON (1½ inch letters)

ON EACH STEP (¾ inch letters)

Electric or well lighted signs should be installed indicating that the manlift is intended for the use of employees only.

If other types of hand holds are in use, a flap should be arranged at each hand hold so it will drop down over



It's the **KNOW-HOW** that **COUNTS!**

An *efficient* dust collecting system must be engineered to the building, equipment and conditions in which it operates.

The DAY organization has had 65 years of experience in planning, fabricating and installing dust control systems—especially in the grain and milling industry.

This specialized experience, plus complete MODERN equipment and the convenience of three strategically located plants, can be helpful to you in planning for greater efficiency, safety and profit in your plant. There's no obligation in writing us about your needs.

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the hand hold when that particular handle is following a step on the up side or is ahead of a step on the downside. This arrangement precludes the possibility of grasping the wrong hand hold.

6. Floor Landings:

The bottom landing, when the elevator pulley is above the floor level, should be provided with steps and a platform on the upside so that the level of the platform is at the same level as the elevator step as it completes the semi-circle around the bottom of the elevator pulley. There should be no steps and platform on the downside. The floor itself should serve as a landing area.

Where space permits, a platform $2\frac{1}{2}$ or 3 feet above the floor level should be provided on the top floor. This platform will permit an employee to step off the manlift in the event he rides past the top landing and the automatic switch fails.

This platform can also serve as a platform for servicing the motor and other driving mechanism at the top of the elevator. Steps should be provided to this platform so that the manlift will not be used to reach it.

The landings on all floors should be protected with a non-skid surface. At each landing there should be an en-

closure of standard guard rail allowing only sufficient opening for getting on or off the elevator, leaving a landing space of not less than 2 feet around the opening.

The standard rail should be arranged so that an employee going through the guard rail must make a turn before arriving at the manlift



opening. In other words, the opening should either be indirect or staggered.

This will prevent anyone from falling through the guard rail opening and down the elevator shaft. The area immediately adjacent to the landing space should not be used for piling materials, tools, or any other items.

A toeboard not less than 4 inches in height should be installed directly under the guard rails to prevent any object from inadvertently sliding under the guard rail and down the manlift opening.

7. Brakes:

The brake used must be capable of quickly stopping the manlift. A travel of 6 inches after application of the brake should be maximum. The magnetic type actuated by a spring, which is held open by a magnet, is preferred. If this type is used it should be tested frequently to guard against failure.

Brake bands should be inspected frequently to guard against failure and should be of sufficient size to guarantee quick operation.

8. Switches, Relays and Lights:

The automatic safety switch or switches should be located immediately above the top floor landing, not over 12 inches above the floor, and should be so arranged that after being thrown by the step they can be reset only to the top floor, and located in such a position so that the person resetting them has a clear view of both the up and down side of the elevator shaft.

In no event should they be so located that a person standing on the

HOW WE DO IT?

First, we maintain a skilled, trained organization of engineers and mechanics, whose experience enables them to meet the most exacting machinery erection and installation requirements.

This is because the makers and designers of conveyors, monorail systems, materials handling equipment, production and processing machinery have found it best to pool their ingenuity with that of our skilled erectors so that their new or altered equipment could serve to the utmost.

Second, we "KNOW-HOW" to make the necessary changes in your production processes less complicated, so that the shift-over to new operations can be made with the least loss of normal output.

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Crane Yard1306 W. Cermak Road
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Chicago 8, Illinois — All phones SEEley 1677

step can reset them. The proper installation should prevent anyone from the lower floors from starting the manlift after the safety switch has been thrown because of a person's riding past the top floor landing.

If practical, there should be no starting switch which can be actuated from every floor. However in cases where this is impractical, it is permissible, but in no event should this starting switch be so arranged that it can start the manlift after the manlift has been stopped by the automatic safety switch. The rope which actuates this starting switch, as well as the regular stop switch, should be sash cord with an inner core of wire. This will prevent any stretching or shrinking.

A secondary safety stop should be installed to operate automatically immediately after and in the event of failure of the regular safety switch. The purpose is to positively prevent the possibility of a man's being carried over the top of the manlift.

A flashing electrical sign should be conspicuously placed above the top floor. This flashing sign should carry the words "GET OFF" and should be in operation at all times while the manlift is in operation.

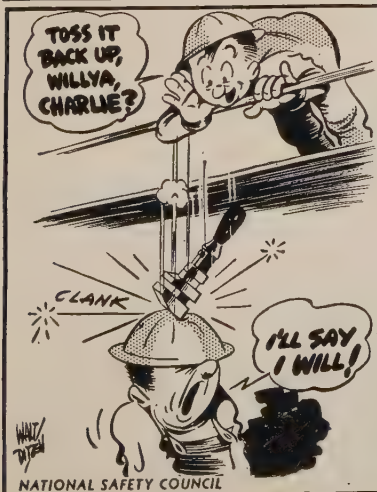
Adequate lights should be provided at every landing.

In conclusion, safety on the manlift is no different from safety anywhere else throughout the plant, and is dependent upon the three E's of safety—Education, Engineering and Enforcement.

So True—So Sad

Little bankroll ere we part,
Let me press you to my heart.
All the year I've clung to you,
I've been faithful, you've been true.
Little bankroll in a day,
You and I will start away,
To a good vacation spot,
I'll come back, but you will not.

DON'T BE AN ACCIDENTEE!



COLOR ON DOORS

Bands of bright orange, 6 to 8 inches wide, painted on the bottom edges of overhead doors, have saved maintenance and reduced accidents in our plants.

These bands help to make it obvious if the door has not been raised enough to clear high loads coming in or going out on trucks.

They are especially helpful on outside doors that trucks have to back under. Bands of the same color are used also on low balconies or any other overhead obstruction.

We use the orange color in our

plant because it is also used for traffic lanes, and our employees are familiar with it.

Before this color marking, overhead doors were considerably battered, and frequently needed repairing so that they would close properly. And accidents caused by people banging their heads on the overhead doors have been greatly reduced.—Super.

Freak Accidents

The sad case of a hunter who shot himself in the knee when his arm was jarred by a duck, causing his trusty automatic pistol to go off, is listed by the National Safety Council in its 1945 round-up of freak accidents.

Control... WEEVIL...along with EGGLIFE and LARVAE

by using

Larvacide

CHLORPICRIN

Chlorpicrin Tear Gas Fumigant

More than twenty years of success has proven the effectiveness of Larvacide. Users acclaim it because it

- PENETRATES KERNELS to kill egg life within.
- GETS INTO WOODWORK cracks and crevices to kill lurking refugees.
- EASILY APPLIED by your own men with inexpensive equipment.
- EXCEPTIONALLY ECONOMICAL—Only \$1.50 to \$1.70 per 1,000 bushels in closed concrete bins.

FOR SHALLOW BINS

which cannot be turned conveniently

USE LARVACIDE 15-MIX

spraying or sprinkling grain surface.

Larvacide comes in cylinders of 25, 50, 100 and 180 lbs., and in 1-lb. Dispenser Bottles, each in sealed can. Larvacide 15-Mix comes in 50-gallon drums only. Stocked in principal cities.

Write for Booklet GR-9 on effective, economical pest control.

GET RID OF RODENTS, TOO

Your grain treatment will also bring sweeping rodent kills or light space fumigation will get rid of rats, driving them out to die on the open floor—without carcass nuisance.

Larvacide comes in cylinders of 25, 50, 100 and 180 lbs., and in 1-lb. Dispenser Bottles, each in sealed can. Larvacide 15-Mix comes in 50-gallon drums only. Stocked in principal cities.

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LUBRICATION

By GILBERT P. LANE, Arcady Farms Milling Co.

BEFORE CHICAGO S.O.G.E.S. MEETING

FROM the standpoint of maintaining continuity of operation, keeping power costs at a minimum, and eliminating the "hot box" fire hazard there is nothing more important in the plant than proper attention to the lubrication of bearings. Quite often the duty of oiling bearings is delegated to some entirely incompetent person when as a matter of fact oilers should be carefully selected for trustworthiness and sense of responsibility.



It is a simple matter for a shiftless oiler to neglect those bearings which are located in out-of-the-way places or those which may necessitate his crawling along a cat walk to reach. Or, assuming that he does reach all bearings, he may simply give them a squirt of oil, trusting to luck that the oil reaches the bearing surfaces where it will do what it is intended to do.

Best Grades Cheapest

IN maintaining bearings in proper condition it is, of course, important first of all that they be properly babbitted, if of the plain type. Next in importance is the matter of selection of the lubricant. Only the best grades of oils or greases should be purchased, for this will be found the most economical in the long run. Further, the correct type of oil or grease for the particular application should be selected. Those from whom you purchase lubricants will be glad to assist you in this regard.

Select for oilers in your plant men in whom you have confidence and hold them responsible for the condition of bearings. They should be instructed to report to the Superintendent immediately any bearings which show a tendency to run excessively warm, for if caught in time, expensive shut-downs may be avoided.

The oiler should be instructed to use

sufficient oil to properly lubricate the bearing. However, contrarywise, he should keep in mind that oil which has been "slopped" over the bearing housing, on cross trees, and on floors has no beneficial effect on the bearing—but on the other hand represents waste of money, results in an untidy plant, and introduces definite fire hazards. He should be asked to carefully wipe the bearing clean of dust and excess oil rather than to permit a dust-oil mixture to build up on the bearing and so prevent the radiation of heat.

Adding Graphite Saves 5%

MANY plants are now mixing with their regular oils and greases a small quantity of colloidal graphite of which there are several brands on the market. Superintendents have reported decided savings in power expense and freedom from hot bearings since adoption of such graphitic lubricants; in fact, one large plant found that a saving of 5% was made.

A multi-unit line of plants, after considerable experimenting with various methods of lubrication, standardized on self-feeding grease cups using a special type of grease having various consistencies for the different types of duty. Their experience has been excellent and the results have been decidedly noticeable in the way

of reduced lubrication expense, both for material and labor, no hot boxes, and a surprising absence of oil and grease spillage.

Modern Bearings Save

NO discussion of bearings and lubrication would be complete without mention of ball and roller bearings. Bearings of these types have proved their value in reducing friction load, in effecting savings in lubrication expense, and in eliminating hot bearings. Full consideration should be given to specifying ball or roller bearings when replacing old bearings or when purchasing new machines. The first cost may be higher but the difference is soon absorbed by savings made.

MAKE USE OF YOUR ANNUAL FIRE EXTINGUISHER DISCHARGE

Very likely all of us at one time or another have felt the emptying of fire extinguishers promiscuously every year is quite a waste.

But if you want to get your money's worth from this practice, build a fire out of waste materials with a little kerosene sprinkled on it, and have different employees discharge them, thereby learning the most efficient way of putting out a fire.

This is also a way to create interest in your fire prevention work, because all of us get a kick out of trying to put out a blaze.

The Critic

A little seed lay in the ground
And soon began to sprout.
"Now, which of all the flowers around,"
It mused, "shall I come out?"
"The lily is so fair and proud,
But just a trifle cold;
The rose, I think is rather loud,
And then its fashion's old."
"The violet—it is very well,
But not a flower I'd choose
Nor yet the Canterbury bell—
I never cared for blues."
And so it criticized each flower,
This supercilious seed,
Until it woke one summer hour,
And found itself a WEED!

—Author Unknown.



"It's slower this way, but it's fresh."

KNOWS FROM EXPERIENCE

Will I ever work on the Static Electricity Committee? Well I should say I will, and gladly! Nothing would suit me better. Eliminating static was my top hobby at C.P.R.'s Edgewater plant, and it received my top-most attention due to a personal experience I had when Fire Marshal while making my daily inspections through the Corn Elevator a way back in 1925. It was shortly after the terrific explosion at the Pekin Plant when 41 employees were killed. As usual, the cause of the blow-up was in doubt. Consequently I was more determined than ever to make a thorough investigation of all dust explosion hazards in our plant.

While walking through the top (6) floor of our Corn Elevator, I was passing a cross belt running up through the floor from the fifth floor. While passing this belt a lightning-like arc about two feet long jumped to my arm. I quickly realized that here was a fire hazard, and that if the area was filled with dust and the right



mixture of oxygen another dust explosion of "unknown origin" would result—and I would not be "here" to tell about it.

Immediately reported my discovery to our Plant Manager and he gave me the "go ahead" order on grounding all static electricity and possible points of its generation. With the aid of a spark detector and several electricians, I had every belt, shafting, grinders, conveyors, sifters, air blowers, yes every friction machine in all dusty locations throughout the plant properly and effectively grounded. The result was that the Edgewater plant operated free of dust explosions for 16 years thereafter.

Also reported my activities at that time to our good friend Chester J. Alger, and as everyone knows he has since made great contributions to the study of eliminating the dust explosion hazards of static electricity.—Wm. F. Schaediger, retired, Corn Products Refining Co., North Bergen, N. J.

He who can preach a better sermon, write a better book or make a better mousetrap than his neighbor, though he dwell in the depths of the wood, the world will make a path to his door.—Emerson.

CONVEYOR MISHAP

A grain processing plant manager, removing the cover of a screw conveyor to check the flow of grain, inadvertently stepped into the screw when his attention was diverted. His foot was immediately amputated and he died of loss of blood.



NATIONAL SAFETY COUNCIL

Correction: Enforced was the rule, thereafter, that moving machinery must be stopped before guards are removed, and only trained maintenance crews or regular mechanics were permitted to remove covers of conveyors.

"Things are so peaceful in Indiana that if an atom bomb dropped out there it would just lay there and grow."—Herb Shriner, commentator.

Douglas



POLICY AND PURPOSE

When grain handlers speak of fumigants it's only natural for them to speak of "TETRA-FUME". The leadership enjoyed by this grain fumigant did not come about by chance. Thirty-one years of research and experience have gone into this product. Douglas Chemical & Supply Company have not permitted changing times or present-day conditions to influence the quality of their products. Today, as always, their one policy and purpose is to produce a fine grain fumigant at a fair price.

Efficient service is brought about by a strategic location in the heart of America and by a modern plant, equipped with the latest and finest machinery. Steady growth and progress are reflected from customers in forty-five states. As the circle of patrons continues to widen, an expression of appreciation for your confidence and good will is in order.

Full details available on fumigation problems.

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MINNEAPOLIS, MINNESOTA; PORTLAND, OREGON.

WARD STANLEY TOPS NEW MEMBERSHIP LIST

Ward Stanley, Standard Milling Co., who just retired as president of the Kansas City SOGES Chapter and is now a SOGES director, topped the list of those obtaining new members in the Superintendents' Society between the Chicago and Cedar Rapids conventions, according to President Harold C. Wilber of A. E. Staley Mfg. Co., Decatur, Ill. Mr. Stanley turned in ten new members.

Retiring President Herbert C. Brand of The Quaker Oats Company, Cedar Rapids, is second high man on this membership "totem pole" with

a big nine figure. And James Auld, Hales & Hunter Co., Minneapolis Chapter Secretary, comes next with eight.

Tied for fourth place with six each are Lloyd Forsell, Albert Schwill & Co., Chicago Chapter President, and a new SOGES director; Russell Maas, Screw Conveyor Corp., Hammond, and John Goetzinger, Rosenbaum Brothers, Omaha Chapter Secretary. Jake Kintz of J. C. Kintz Co., Cedar Rapids, holds undisputed fifth place with five new members.

Sixth place with four new member-

ships each, is another tie, this one between four active participants, including: SOGES Director John Mack of Standard Milling Co., Buffalo; John Blowers, Standard Milling Co., Kansas City; SOGES Vice President Cliff MacIver, Archer-Daniels-Midland Co., Minneapolis, and SOGES Director Jim Kier, National Milling Division of Nabisco, Toledo.

Fifty-Eight Participate in Contest

Six membership workers tussle for seventh place, turning in three new men apiece, including: Cliff Steiner, Central Soya Co., Decatur, Ind.; SOGES Director Gil Lane, Arcady Farms Milling Co., Chicago; SOGES Director Paul Christensen, Van Dusen-Harrington Co., Minneapolis; Ass't Safety Committee Chairman Steve Halac, The Glidden Co., Chicago; SOGES Director Fred A. Sibbald, National Grain Co., Ltd., Fort William-Port Arthur Chapter Secretary, and SOGES President Harold C. Wilber, A. E. Staley Mfg. Co., Decatur, Ill.

SOGES Director Ted Manning, Uhlmann Grain Co., Kansas City, tops the list of those turning in two new members, followed by Don Hanson, Safety Director, International Milling Co., Minneapolis; SOGES Director Oscar W. Olsen, F. H. Peavey & Co., Duluth; Charles Walker, A-D-M Co., President Omaha-Council Bluffs SOGES Chapter; Bernard Friel, Rodney Milling Co., retiring Kansas City Chapter Secretary; SOGES Director Emil Buelens, The Glidden Co., Chicago; Bob Ginn, Kansas Milling Co., Wichita; Ray Seeker, Anheuser-Busch, Inc., St. Louis; SOGES Vice President John Belanger, Manitoba Pool Elevators, Ltd., Port Arthur, and Director Ralph Garber, Enid Elevator Corp., Enid.

Thirty-one members turned in one member apiece, so that the tabulation looks about like this:

AT THE TOP . . .



**THERE'S ROOM
FOR ONLY ONE!**

It's a fallacy that "There's plenty of room at the top."

Actually only one can be BEST and, applied to grain belt, this means IMPERIAL . . .

...BLACK REXALL for heavy duty legs . . .

...STANDARD REXALL for bag conveyors.

GET THE FACTS — GRAIN BELT
USERS CAN'T AFFORD TO
MISS 'EM.

IMPERIAL BELTING COMPANY

1750 S. KILBOURN

CHICAGO 23



"The plumber just couldn't keep his eyes off me, Poppa."

Here's the Record

Ward Stanley	10	Oscar Olsen	2
Herb Brand	9	Charles Walker	2
Jim Auld	8	Bernard Friel	2
Lloyd Forsell	6	Emil Buelens	2
Russell Maas	6	Bob Ginn	2
John Goetzinger	6	Ray Seeker	2
Jake Kintz	5	John Belanger	2
John Mack	4	Ralph Garber	2
John Blowers	4	Ben Danielson	1
Cliff MacIver	4	A. P. Jurgens	1
Jim Kier	4	Arthur Osgood	1
Cliff Steiner	3	*Jim Shaw	1
Gil Lane	3	Jim DeJarnette	1
Paul Christensen ...	3	Ed Frauenheim Jr..	1
Steve Halac	3	C. F. Peterson	1
Fred Sibbald	3	Gordon Laugen	1
Harold Wilber	3	*Milton Martin	1
Ted Manning	2	Bart Pow	1
Don Hansen	2	Lee Atherton	1

Glen McKinnon	1
Ernie Ohman	1
H. J. Anderson	1
O. B. Duncan	1
Howard Habegger ..	1
Felix Schwandner ..	1
Cliff Winslow	1
Bill Gassler	1
Charles Harbin	1
Harley Hixson	1
Clarence Maxwell ..	1
Hollis Graves	1
Wm. Deegan	1
W. A. Thompson Jr.	1
Norman Boardway ..	1
Art Benson	1
Bill Feemster	1
M. M. Darling	1
W. P. Anderson	1
Wm. Grogan	1
*Deceased	

Flour Mills Co., Kansas City, Mo.	
165 Herbert H. Goeltzer from Wm. Henry Radke, Corn Products Refining Co., Chicago.	
194 E. J. Hansen, M. W. Kellogg Co., Chicago.	
331 F. A. Galbraith, MacWhyte Co., Minneapolis.	
69 John Heimovics, Jones-Hettelsater Const. Co., Kansas City, Mo.	
359 Hugh King, Scoular - Bishop Grain Co., Kansas City, Mo.	
439 O. E. Kinman, Cargill, Inc., Kansas City, Mo.	
543 George Schaffer, B. A. Eckhart Milling Co., Chicago.	
239 M. M. Noxon, Cargill, Inc., Minneapolis.	
337 John H. Irwin, Western Grain Co., Ltd., Fort William.	
324 John J. Chenier, Saskatchewan Pool Terminals, Ltd., Port Arthur.	
448 Joe L. Guinan, Loveland Elevator Co., Missouri Valley, Ia.	

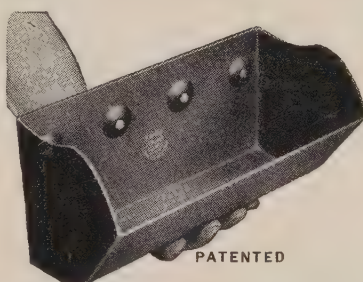
A new membership contest started June 1, and 21 new members have been reported, largely by the leaders in the last contest. "How about your getting busy and interesting that neighbor of yours?" queries President Wilber.

SOGES MEMBERSHIP RE-INSTATEMENTS AND TRANSFERS

ReinstateMENTS and transfers of SOGES memberships between the Chicago and Cedar Rapids conventions are reported by John Belanger, Manitoba Pool Elevators, Ltd., Vice President of the Superintendents' Society to be very encouraging. He lists them as follows:

463 A. C. Renner, Mid - Continent Grain Co., Kansas City, Mo., from Roy A. Conger	
490 Ralph Martin, Cook Chemical Co., Kansas City, Mo.	
392 W. H. Roennfeldt, Russell-Miller Milling Co., St. Joseph, Mo.	
162 Wm. T. Husband, E. R. Bacon Grain Co., Chicago.	
172 Wm. A. Randall, retired, Portland.	
282 Milton E. Crosby, Chicago.	
380 Alex Ross, National Harbours Board, Kingston, Ont.	
332 Percy McCallum, retired, Pt. Arthur.	
447 L. B. Cunningham, The Quaker Oats Co., Petersborough, Ont.	
416 C. E. Grossman, Scoular-Bishop Grain Co., Council Bluffs, Ia.	
358 Frank McDermott, retired, Kansas City, Mo.	
457 J. S. Fisher from W. H. Cowan (deceased), Maple Leaf Milling Co., Ltd., Port Colbourne, Ont.	
487 Herman Peterson, Van Dusen-Harrington Co., Minneapolis.	
357 Roy E. Browne, Continental Grain Co., Kansas City, Mo.	
437 A. L. Nealey, Salina Terminal Elevator Co., Kansas City, Mo.	

622 Don Hallgren from A. C. Johnson, Moore-Seaver Grain Co., Kansas City, Mo.
493 Wm. H. Messersmith, Kansas



THE "NU-HY" BUCKET IS A Challenge TO TRADITIONAL METHODS OF HANDLING GRAIN



"Nu-Hy" Buckets will increase your capacity! Their very design proves that! The high sweeping sides—high lip—greater load carrying ability and the possibility of continuous spacing on belt are the deciding factors. We've proved it time and again.

"Nu-Hy's" are the result of scientific research in elevating grain. A leg equipped with "Nu-Hy's" spaced on belt according to our studied recommendations will bring any leg up to its highest potential capacity.

"Nu-Hy's" carry more, hence deliver more. They empty clean . . . no back legging . . . no lost motion. Everything about the "Nu-Hy" is scientific . . . its design . . . its construction . . . its performance. Why not equip your legs with the best! Send for form No. 76 and let us analyze your operations. You'll choose "Nu-Hy's" when you see the results they make possible.

No lost capacity when "Nu-Hy's" are installed.

Screw Conveyor Corporation
707 HOFFMAN ST. HAMMOND, IND.
ENGINEERS PRODUCTS
TRADE MARK REG. U.S. PAT. OFFICE

CAR SPOTTERS or PULLERS

LINK-BELT and Stephens-Adamson Car Pullers
5 H.P. and 10 H.P. Sizes. Motorized

Also, repairs, rope, cables and sheaves

J. C. KINTZ CO.

Machinery & Supplies

Grain Elevator - Feed Mills - Soya Mills - Food Processors

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CEDAR RAPIDS, IOWA

EXPORTS UP

Exports of grain and grain products during August totaled an estimated 875,000 long tons (34,479,000 bushels), according to the U.S.D.A. This total included (in terms of whole grain equivalent): wheat, 454,000 tons; flour, 351,000 tons; corn, 10,155 tons; grain sorghums, 17,000 tons; and oats, 42,500 tons.

In addition, about 9,000 long tons of Canadian wheat milled in bond in the U. S. was shipped, raising the total shipments from the U. S. to 884,000 tons.

The largest shipments, amounting to 248,000 tons, were for British Empire countries (other than India) including the British Zone in Germany. Shipments to U. S. occupation zones totaled 147,000 tons and deliveries to UNRRA (including the Italian national program) totaled 143,000 tons. India received 87,000 tons.

The August exports raise the total of exports of U. S. grain and grain products since July 1 to 1,817,000 long tons (70,049,000 bushels).

CORN GRIND UP

During August the eleven refiners of corn ground 9,586,249 bu for domestic consumption, according to the Corn Industries Research Foundation.

CARLOADINGS TO PICK UP

Carloadings of grain will increase 6.3% during the last quarter of the year, according to estimates made by the Shippers Regional Advisory Boards. Compared with the 426,220 cars of grain loaded during the same period last year, some 452,952 cars will go forward this quarter.

Carloadings of flour, meal and other mill products, on the other hand, will decline 1.7%, or from 255,653 cars loaded last year to 251,394 this time.

CARLOADINGS OFF SLIGHTLY

Carloadings of grain and grain products have sagged a little this year compared with the last two shipping seasons and are under 1945 figures by 9.2% and under 1944 by 2.4% only. During the first 36 weeks of 1946, 1,694,629 carloads went forward, compared with 1,866,019 in 1945 and 1,740,418 in 1944. Recently loadings have totaled:

	1946	1945	1944
Aug. 17.....	50,310	53,897	49,913
Aug. 24.....	46,481	66,768	49,327
Aug. 31.....	48,068	66,255	47,862
Sept. 7.....	42,746	51,498	43,621

"People might say this case smells!"—Judge Walter Gates, Los Angeles, re. theft of 27,800 lbs. of garlic.

WHEAT GRIND UP 26%

Wheat ground during July showed a 26% jump over the previous month, however, the June grind was exceptionally low. During July, 1,123 mills ground 47,500,000 bu wheat, compared with 37,556,000 bu ground by 1,115 mills in June, and 52,281,000 bu ground by 1,034 during July of 1945.

CORN MOISTURE UP

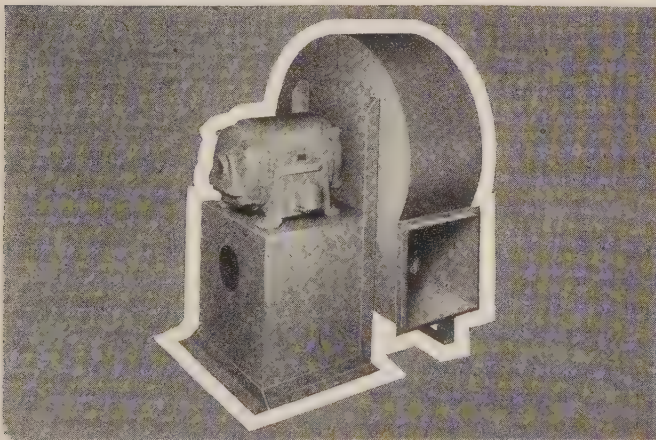
The moisture content of new corn is 8% higher than the average for the past 10 years, according to the Iowa State Dept. of Agriculture, and despite the good drying weather is higher than the industry anticipated.

URUGUAYAN FLAX IMPORTED

The first lot from 2,500,000 bu. flax purchased by the government from Uruguay reached Buffalo recently. It will be processed by Spencer Kellogg & Sons in the first flax-seed crushing operations in the local plant this year.

Okay As Now Published

"GRAIN" is okay as now published. It gives readers a good variety of timely articles.—L. C. Irwin, Searle Terminals, Ltd., Fort William.



Improved designs of all types for every
ELEVATOR AND MILL SERVICE

Steel Plate Blowers and Exhausters—

For air moving material handling.

Disc and Propeller Fans—

For ventilation and dust disposal.

Industrial Vacuum Cleaners—

For dust and spillage pick-up.

Roof Ventilators—

In rotary and stationary styles.

GENERAL BLOWER CO.

Engineers and Manufacturers

Factory Offices
8604 Ferris Ave.
MORTON GROVE, ILL.

District Sales
506 N. Dearborn St.
CHICAGO 10, ILL.



NOW
IS THE TIME TO ADVERTISE

"Scarcities!" "Strikes!" "Unrest!"

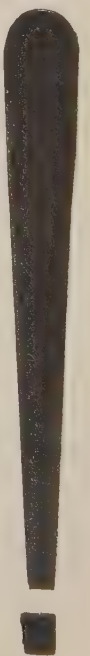
"This, that, and the other thing!"

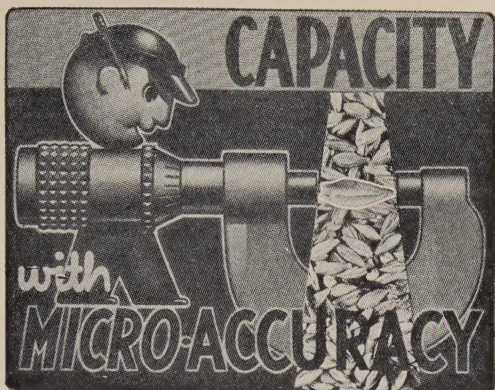
Sure, we know all about THAT. We know, too, these are going to end one of these fine days, and when the glad Buzz! Buzz! Buzz! of Busy-ness purrs across this grand old land there's going to be a lively scramble for orders.

The boys who are farsighted enough to KEEP their names prominently in "GRAIN" NOW . . . who advertise continually . . . are the ones who will be way out in front when "business-as-usual" conditions return.

REMEMBER

the saying: "Out of sight is out of mind". Advertise NOW and for the duration, lest they forget YOU!

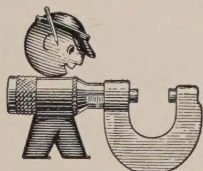




2-80-4
ASPIRATOR

Double Air Ducts for Better Aspirating

MIKE SAYS:



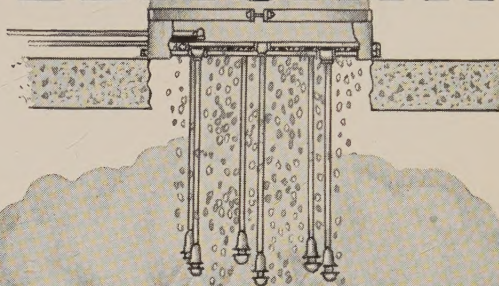
With double air ducts, spread your grain twice as long, and twice as thin. This means effective capacity aspirating to lift away dust, beeswing, hulls and thrash from corn, soya beans, wheat and other grains, with less power output. In the above model, the compact design also includes four double disc scalpels, to comb out sticks, stones, straw and thrash. **CAPACITY:** wheat 5,000 bushels, oats 3,000 bushels per hour. Length O. A., 127½ inches; width O. A., 87½ inches; height to feed intake top, 81½ inches

Applications include: MALT HOUSES, cleaning of barley before storage, turning operations. FLOUR MILL ELEVATORS, pre-cleaning wheat before storage, aerating and turning. RICE MILL ELEVATORS, removing coarse screenings before drying, storing, cleaning rough rice. OTHER, removing thrash, sticks, and coarse matter; removing accurately all light screenings before storage or processing. *Write us for information on your scalping or aspirating problems.*

SUPERIOR SEPARATOR COMPANY

St. Louis Park Station
Minneapolis 16, Minnesota

FASTER LOWER COST BLEACHING



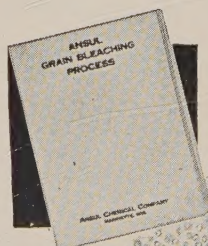
Install an

ANSUL SO₂ GRAIN BLEACHING SYSTEM

No Drying...No Rehandling Necessary

Replace costly, cumbersome, inefficient Sulfur Burner equipment with a modern ANSUL (Patented) SO₂ Grain Bleaching System. Easy and economical to install and operate, the ANSUL System mixes pure, liquid sulfur-dioxide with water mist to form a constant sulfurous acid concentration that completely coats each kernel for perfect uniformity of bleaching.

Always ready for instant operation, the ANSUL process assures rigid control of bleaching and economically enhances the appearance value of off color grain. The entire system may be turned on or off with the twist of a valve handle. Grain can be bleached as needed. No obnoxious fumes, no heating, cooling, drying nor rehandling, no fire hazard. Stops grain fermentation immediately.



Write for detailed information on the ANSUL Patented Grain Bleaching Process. Our technicians will show you how easily it may be installed in your elevator. Enjoy the benefits of faster, more efficient grain bleaching.

ANSUL CHEMICAL COMPANY
INDUSTRIAL CHEMICALS DIVISION, MARINETTE, WIS.
Eastern Office: 60 E. 42nd St., New York City

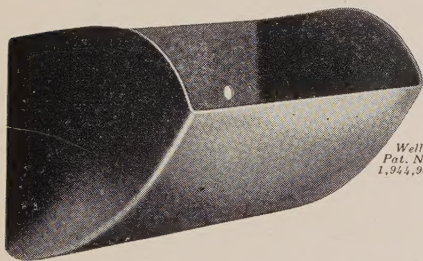
THEY COME TO TOWN

Recent callers in the windy city included: Edwin Ahlskog, Kansas City; Charles J. Winters, Public Grain Elevator, New Orleans; Dave Swan, Gruendler Crusher & Pulverizer Co., St. Louis; Clay Kabat, Grain Buyer, National Milling Division of Nabisco, Toledo; Ingram H. Richardson, Richardson Scale Co., Clifton, N. J.; Orland Lehnus, Vitality Mills, Inc., Morris, Ill.; Ernie Granzow, The Day Co., Minneapolis; Tom A. Strid, Strid Grain Co., Green Bay, Wis., and Grover C. Meyer, Kansas City (Mo.) Power and Light Co.

SOLIDAY AT MARFIELD

Eugene Soliday is now Superintendent of Rahr Malting Company's Marfield Elevator in Minneapolis, succeeding Roy Manning. Mr. Soliday was formerly millwright at the plant.

Share your "work-knowledge" with your fellow workers and they will share their "know-how" with you.—Gilbert P. Lane, Arcady Farms Milling Co., Chicago.



ISN'T BEING DONE ANY MORE

Can you walk into an automobile dealer and say: "I want a new car" . . . and drive a shiny new model away? No sir! And its the same with a lot of things, due to scarcity of raw materials. Today, orders must be placed well in advance of desired delivery date. So, won't you please bear that in mind when in the market for the

CALUMET SUPER CAPACITY ELEVATOR CUP

B. I. WELLER CO.

327 S. La Salle St.

Chicago 4, Ill.

KANSAS CITY LEADS

Kansas City SOGES Chapter chalked up a gain of 27 members between the Chicago and Cedar Rapids conventions, topping all other association chapter groups. Members not in organized chapters, however, poured into the Association over twice as fast as they did into the Kansas City unit, with a total of 58.

Chicago SOGES Chapter pushed closely on the heels of the Missouri-Kaw River boys, however, with a 23. And Minneapolis, in turn, was crowding for second spot with a total of 20 during the period. The Omaha and the Ft. William-Pt. Arthur Chapters tied with one another, including reinstatements, with an even half dozen each. Here's the way the contest wound up:

Non-Chapter	58
Kansas City	27
Chicago	23
Minneapolis	20
Ft. Wm.-Pt. Arthur	6
Omaha-Council Bluffs	6
Total	140

Reinstatements accounted for 22 of the above number.

ENJOYED CONVENTION

I want to say right here that I enjoyed the SOGES convention at Cedar Rapids very much, and was real glad to make the acquaintance of so many fine fellows. Am looking forward to attending the 1947 meeting in Kansas City, May 15-16-17, and hope that the boys there will arrange to have the Kansas City "Blues" ball team at home during the convention. If they are that will be where I'll spend one afternoon.—J. Bruce Winfield, Superintendent of Elevator, Capacian Pacific Railway Co., Port McNicoll, Ont.

CHAMPLIN TO SOO

Smith Champlin is now Superintendent of Archer-Daniels-Midland Company's Soo Elevator in Minneapolis, succeeding Glen McKinnon.

FAUST PRODUCTION SUPER

Peter H. Faust was just appointed production Superintendent of Pillsbury's feed unit in Clinton, Ia. Engaged in milling for 40 years, of which 29 have been with Pillsbury, Mr. Faust's experience has been in all phases of the work.

SHEA TO OFFICE

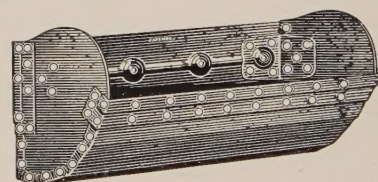
Vin Shea, long Superintendent of Van Dusen-Harrington's St. Anthony Elevator in Minneapolis, has been succeeded by Vernon Winslow. Well known in Superintendent's circles, Vin's health precluded his continuing to work in the plant. He is now happily engaged in the office.

SORRY TO HAVE MISSED

Was unable to come to the Cedar Rapids convention, as we had too much government grain coming in on top of an annual weigh-up. Surely missed being on hand.—M. M. Darling, Acme-Evans Co., Inc., Indianapolis.

ROEHRIG DIES

Theo. F. Roehrig, 70, for the past 38 years Superintendent of Elevators for Ballard & Ballard, Inc., Louisville, died on Aug. 28.



THE FACT STILL REMAINS

that
SUPERIOR ELEVATOR CUPS

are
MADE STRONGER
will
LAST LONGER
have

GREATER CAPACITY

and will operate more efficiently at less cost than other elevator cups.

"DP" - "OK" - "CC" - "V"

write to

K. I. WILLIS CORPORATION
MOLINE, ILLINOIS

for names of distributors
and analysis form No. 20

HIGH CAPACITY GRAIN CLEANING EQUIPMENT for TERMINAL ELEVATORS!



NEW PRIORITY-RATED
EQUIPMENT AVAILABLE
FOR ESSENTIAL NEEDS

Hart-Carter normally offers a complete line of special, heavy-duty cleaners for terminal elevators. Included are the 2564 Carter Disc-Cylinder Separator, combining discs and cylinders; and the all-cylinder 45 Hart Uni-flow Grain Separator. These machines offer a profitable answer to whatever cleaning, grading, separating or processing jobs you may be called on to handle.

HART-CARTER COMPANY

670 Nineteenth Ave. N.E.

Minneapolis, Minn.



Weevil-Cide SPLITTERS

ALL EARS

"Madam, I'm representing the Goat Mountain Wool Company. Would you be interested in some coarse yarns?"

"Sure, go ahead, let's hear a couple."

* * *

AMBITION

A boy who wants to make the news,
Aspires to fill his papa's shoes;
His sister hopes for something
better—

She hopes to fill her mother's sweater.

* * *

THEN WHAT'D SHE SAY?

Stout Lady—Can I go through the gateway for a short cut?

Caretaker—Guess so. I saw a load of hay go through this morning.

* * *

LOGICAL CONCLUSION

A Sunday school teacher finished a talk on behavior and what we must do to go to Heaven. "Now, Tommy," she said, "tell me what we must do before we can expect forgiveness of sin."

Tommy thought a bit, then replied, "We gotta sin."

DIDN'T WANT TO MISS OUT

Mother to daughter: "I don't want you to marry. I've seen the folly of it."

Daughter: "But, Mother, I want to see the folly of it, too!"

* * *

HOT STUFF

Sign in upper New York rural district: "Beware! To touch these wires is instant death. Anyone found doing so will be prosecuted to the full extent of the law."

* * *

SHE WON'T LIKE THIS

Three fastest ways to send a message are—TELEGRAPH, TELEPHONE, TELL-A-WOMAN.

* * *

HIGHER MATHEMATICS

Is "trousers" singular or plural?
They are singular at the top and plural at the bottom.

* * *

GRAMMATICAL TANGLE

Three Polish soldiers trying to learn English were talking about a married comrade who, much to his disappointment, had never become a father. "His wife," said one soldier, "is unbearable."

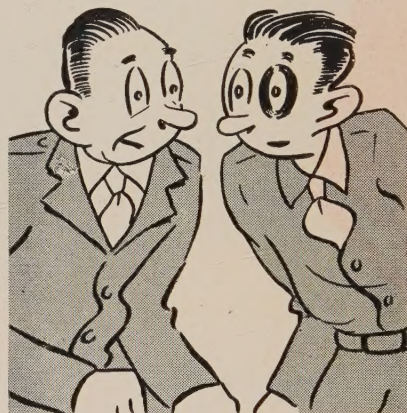
"No, no," said the second, "that's not the right word. She's inconceivable."

Whereupon the third man spoke up very confidently. "You're both wrong; you mean that she's impregnable."

HOW'D HE KNOW?

"Pa," said Mrs. Hidgson, "I'm gettin' real worried 'bout Elmer. Seems like he just don't want to get married."

"Shucks, Ma," Mr. Hidgson spat philosophically, "don't you worry a mite 'bout Elmer not wantin' to marry. He will when the wrong girl comes along."



Sgt.: "Where did you get that black eye?"

Cpl.: "I went to a dance and was struck by the beauty of the place."

* * *

FEMININE REASONING

Dolly: "Surely, you're not going to let that redhead steal your boy friend!"

Polly: "Never! I'll dye first."

* * *

SHOULD SUE WESTERN UNION

Fatal typographical error: Telegram to wife at home from vacationing husband: "Having wonderful time; wish you were her."

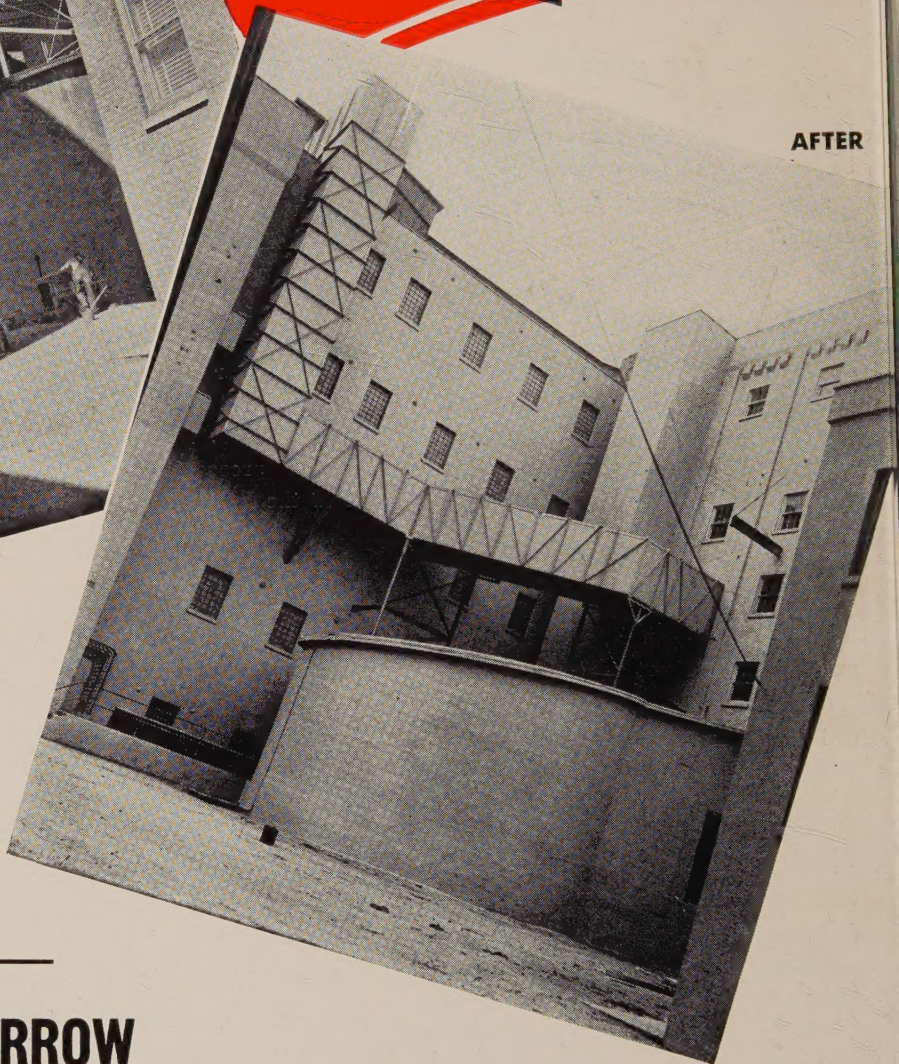


THE **Weevil-Cide** COMPANY
THE DEPENDABLE GRAIN FUMIGANT

1110 HICKORY STREET
KANSAS CITY, MO.



BEFORE



AFTER

BRICK TODAY— CONCRETE TOMORROW

B RICK Properties, Too, Such As The Malting Plant Pictured Above, Lend Themselves Admirably To The Careful Waterproofing Techniques Of Our Experienced Skill.

N OT Only Can Brick Structures Be Given A "New Lease On Life" With Our Perfected Methods, But Their New-Born Attractiveness Will Kindle A Revitalized Pride On Every Hand That Will "Pay Off."

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